S/169/63/000/002/094/127
D263/D307

AUTHORS:     Urazayev, B. M., Babayants, S. P., Glushkov, M. I.,
             Al'mukhanbetov, D., Koristashevskaya, T. I., Popov,
             A. A., Antonenko, A. N., Kolik, A. L., Kotlyarov,
             A. M., Kylbayev, P., Gul'nitskiy, V. L. and Tsare-
             gradskiy, V. A.

TITLE:       Geological and tectonic structure of the Dzhezkazgan-
             Sarysuyskiy region in the light of existing geophy-
             sical data, results and further directions of work

PERIODICAL:  Referativnyy zhurnal, Geofizika, no. 2, 1963, 17, ab-
             stract 2D99 (In collection: Bol'shoy Dzhezkazgan. Ge-
             ol. i metallogeniya. Alma-Ata AN KazSSR, 1961,82-100)

TEXT:  Geophysical work was carried out in the above region with
other regional investigations, to discover areas promising for the
prospecting for copper and other useful minerals. The geological
and tectonic structure of the region is complex. Copper deposits
are associated with local folded structures of second and higher
Card 1/3

Geological and tectonic ...

S/169/63/000/002/094/127
D263/D307

orders, complicated by disjunctive disturbances, and lie in the
gray sandstones of the Dzhezkazgan beds. Geophysical investiga-
tions, begun in 1955, make use of all methods. In spite of the dif-
ficulty of geological interpretation of geophysical data, it was
possible to propose a structural-tectonic structure for the region.
Three structural stages were marked out, 5 geologically distinct
territories were resolved, and 3 main submeridional structures
were discovered. A series of intrusive massifs was also found by
gravimetric and magnetic explorations, which do not emerge on the
surface of the erosion shear, together with a number of large
scale tearing disturbances and fractures. Deep seismic soundings
provided a picture of the course of the surface of Lower Paleozoic
basement and of deeper boundaries. Electric exploration allowed a
resolution of the Dzhezkazgan strata and demarkation of several
salt domes. Owing to widespread occurrence of presumably salt dome
structures and to the favorable section of the Upper Devonian and
Lower Carboniferous, the Dzhezkazgan-Saruyskiy region may be re-
garded as a potential oil and gas area. From the results of com-
bined geophysical works, it was possible to mark out regions which

Card 2/3

Geological and tectonic ...

S/169/63/000/002/094/127
D263/D307

are perspective for copper mineralization, among these the western border of the anticline. /¯Abstracter's note: Complete transla-tion._7

Card 3/3

KAPUSTIN, Leonid Davydovich, inzh.; ZALESSKIY, Lev Grigor'yevich, inzh.;
        GLUSHKOV, Mikhail Tikhonovich, inzh.; SHIRYAYEV, A.P., red.;
        MEDVEDEVA, M.A., tekhn.red.

        [ER electric train with regenerative rheostatic braking] Elektro-
        poezd ER s rekuperativno-reostatnym tormozheniem. Moskva, Vses.
        izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960.
                                                     (MIRA 14:1)
        90 p.
                (Electric railroads--Brakes)

GLUSHKOV, M.T., inzh.

A.C. electric trains. [Trudy] LIIZHT no.193:26-35 '62.
(MIRA 15:12)

1. Rizhskiy vagonostroitel'nyy zavod.
(Electric railroads)    (Railroad motorcars)

GLUSHKOV, M.T.; GONCHAROV, K.B.

ER7 a.c. powered electric train. Elek.i tepl.tiaga  5  no.4:22-28
Ap '61.                                                    (MIRA 14:6)

1. Glavnyy inzhener spetsial'nogo konstruktorskogo byuro Rizhskogo
vagonostroitel'nogo zavoda (for Glushkov).  2.  Zamestitel' glavnogo
inzhenera spetsial'nogo konstruktorskogo byuro Rizhskogo
vagonostroitel'nogo zavoda (for Goncharov).
                    (Electric railroads—Trains)

BARSKIY, Moisey Rafailovich, kand. tekhn.nauk; GLUSHKOV,
Mikhail Tikhonovich, inzh.; TORCHAKOV, Konstantin
Borisovich, inzh.; ZALESSKIY, Lev Grigor'yevich,
inzh.; LALETIN, Geryat Pavlovich, inzh.; IVLYUK,
Leonid Savvovich, inzh.; KALUSTIN, L.D., red.

[The ER9 electric train] Elektropoezd ER9. [by] M.R.
Barskii i dr. Moskva, 1964. 257 p. (MIRA 18:1)

L 14498-66     EWT(1)/ETC(F)/EPF(n)-2/EWG(m)     IJP(c)     GG/AT
ACC NR: AP6003755                SOURCE CODE: UR/0181/66/008/001/0024/0027

AUTHOR: Veselago, V.G.; Glushkov, M.V.; Rukhadze, A.A.

ORG: Physics Institute im. P.N. Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: The amplification of electromagnetic waves in solid-state plasmas

SOURCE: Fizika tverdogo tela, v. 8, no. 1, 1966, 24-27

TOPIC TAGS: electromagnetic wave phenomenon, plasma electromagnetic wave, plasma oscillation, solid state plasma

ABSTRACT: Recently, numerous researchers have investigated the possible electromagnetic wave amplification in solid-state plasmas in the presence of carrier drifts. Starting from the linearized system of Maxwell's equations, the equation of motion of two types of carriers, and the equation of continuity, the present authors develop a theory of and study the conditions for the amplification of UHF oscillations in solid-state plasmas in the presence of carrier drifts in external electric and magnetic fields. An analysis of the results shows that there are favorable conditions for the amplification of waves propagating along the magnetic field in a plasma with an unequal number of carriers. An estimate is given of the maximum frequency which can be amplified, of the amplification, and of the

Card   1/2

L 14498-66

ACC NR: AP6003755

power dissipated in InSb and in Sb samples containing admixtures disequilibrating the number of carriers. The respective carrier concentrations are $\sim 10^{17}$ cm$^{-3}$ and $\sim 10^{19}$ cm$^{-3}$, and the maximum frequencies which could be amplified are $\sim 10^{10}$ sec$^{-1}$ and up to $10^{12}$ sec$^{-1}$. Orig. art. has: 13 formulas and 1 figure.

[08]

SUB CODE: 20 / SUBM DATE: 19June65 / ORIG REF: 003 / OTH REF: 006

ATD PRESS: 4/97

Card 2/2

GLUSHKOV, N.

Moving-Picture Projectors

Regulating the clearance between the notched reel and its supporting rollers.  Kino-mekhanik, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953.  Unclassified.

GLUSHKOV, N.

Let us strengthen the finances of enterprises. Fin. SSSR 19
no.2:27-31 F '58.                                          (MIRA 11:3)

1.Nachal'nik finansovogo otdela Krasnoyarskogo sovnarkhoza.
          (Krasnoyarsk Territory--Finance)

GLUSHKOV, N.

The regional economic council and profits.  Fin. SSSR 19  no.8:45-48
Ag '58.                                                    (MIRA 11:9)

1. Nachal'nik finansovogo otdela Krasnoyarskogo sovnarkhoza.
          (Krasnoyarsk Territory--Industries)

GLUSHKOV, N.

New organization form of financial and economic work. Fin. SSSR 21
no.10:59-62 O '60.                                    (MIRA 13:10)

1. Nachal'nik finansovo-ekonomicheskogo upravleniya Krasnoyarskogo
sovnarkhoza.
                (Krasnoyarsk Territory--Finance)
            (Krasnoyarsk Territory--Industrial management)

GLUSHKA /, N.N.

Bee culture - Equipment and Supplies

Production tests of honeycombs with enlarged cells. Pchelovodstvo 29 no. 4, april 1952

9. Monthly List of Russian Accessions. Library of Congress, August 1953, Uncl.

1. TU'ENOV, N.N.

2. USSR (600)

4. Bee Culture

7. Introducing scientific achievements into apiaries of collective and state farms.
   Pchelovodstvo 29. no. 11. 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1.   N. M. MUSAEV

2.   USSR (600)

4.   Bee Culture

7.   Keeping strong bee colonies in two-body hives. Pchelovodstvo 32 no. 1. 1953.

9.   Monthly List of Russian Accessions. Library of Congress.  April  1953, Uncl.

GLUSHKOV, N. M., ed.

Achievements of science and progressive experience in bee culture   Moskva, Gos.
izd-vo sel'khoz. lit-ry, 1954.  271 p.

USSR / Farm Animals. Honey Bee

Abs Jour: Ref Zhur-Biol., No 5, 1956, 21949

Author : Glushkov N. M.
Inst :
Title : A Plan for Scientific Research on Apiculture for 1956-
1960 (O plane nauchno-issledovatel'skikh rabot po
pchelovodstvu na 1956-1960 gody)

Orig Pub:

Abstract: No abstract.

Card 1/1

USSR / Farm Animals.  Honeybee.                                   Q-7

Abs Jour    : Ref Zhur - Biol., No 14, 1958, No 64591

Author      : Glushkov, N. M.; Poltev, V. I.
Inst        : Not given
Title       : On Apiculture in Poland (from Personal Impressions).

Orig Pub    : Pchelovodstvo, 1957, No. 12, 53-54.

Abstract    : There are about 1,000,000 bee colonies in Poland.  Scient-
              ific work is conducted by the Section of Apiculture of
              the Institute of Horticulture situated at Skierniewice,
              20 km. from Warsaw, by five zonal experimental stations
              and by 15 experimental apiaries.  The diseases of bees are
              studied at the Central Scientific Research Veterinary Ins-
              titute (Gorzow Wielkopolski).

Card 1/1

GLUSHKOV, N.M., kand.sel'skokhozyaystv.nauk, red.;SYCHIK, Ye.V., red.;
    DEYEVA, V.M., tekhn.red.

    [Ways of increasing productivity in beekeeping] Priemy povy-
    sheniia produktivnosti pchelovodstva. Moskva, Gos.izd-vo
    sel'khoz.lit-ry, 1958.  271 p.                    (MIRA 12:3)
                    (Bee culture)

GLUSHKOV, Nikolay Mikhaylovich, zasluzhennyy zootekhnik RSFSR; KATSHEL'SON,
S.M., red.; SAVCHENKO, Ye.V., tekhn.red.

[For further development of beekeeping] Za dal'neishee razvitie
pchelovodstva. Moskva, Izd-vo "Znanie," 1959. 31 p. (Vsesoiuznoe
obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii.
Ser. 5, Sel'skoe khoziaistvo, 3)                    (MIRA 12:2)
                        (Bee culture)

GLUSHKOV, N., zasluzhennyy zootekhnik RSFSR

Large-scale experimentation in beekeeping. Nauka i pered.op.
v sel'khoz. 9  no.8:43-45  Ag  '59.              (MIRA 12:12)
                  (Bee culture)

GLUSHKOV, Nikolay Mikhaylovich; ROZOV, Sergey Alekseyevich; ULIN,
     I.I., red.; KHOLIN, G.Ye., red.; SAYTANIDI, L.D., tekhn.
     red.

     [Advice to the beekeeper]Sovety pchelovodu.  Moskva, Izd-
     vo M-va sel'.khoz. RSFSR, 1961.  150 p.     (MIRA 15:11)
                         (Bee culture)

GLUSHKOV, N. (Director of the Scientific Research Institute of Apiculture)

A letter to the Editor, concerning the compilation of the bibliography of new scientific works on apiculture (beginning with Jan. 1, 1961)

Veterinariya, vol. 39, no. 7, July 1962  p. 37

GLUSHKOV, Nikolay Mikhaylovich; KADIYEVA, Ye.V., red.; GUREVICH, M.M.,
    tekhn. red.

    [Manual for the bee keeper]Sputnik pchelovoda. Moskva, Sel'-
    khozizdat, 1962.   318 p.                        (MIRA 15:9)
                    (Bee culture)

GLUSHKOV N. N.

Lesa Urala (Forests of The Ural)  Sverdlovsk, Izd-vo Ural'skogo Filiala Akademii
Nauk SSSR, 1948.
230 P. Illus., Maps, Tables.
At Head of Title:  N. N. Glushkov, V. I. Vengerov (1d) Akademiya Nauk
SSSR. Ural'skiy Filial.

SO: 7N/5
729.4
.T6

ACC NR: AP6002937     (A)         SOURCE CODE: UR/0286/65/000/024/0104/0104

AUTHORS: Alferov, A. V.; Vashchenko, V. P.; Glushkov, N. P.; Shopelev, Y. R.

ORG: none

TITLE: A device for the automatic verification of angle-code converters. Class 42, No. 177165.

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 104

TOPIC TAGS: code converter, code evaluation, error automatic data correlation, error detection code

ABSTRACT: This Author Certificate presents a device for the automatic verification of angle-code converters. The device includes a reference converter and the converter under examination, both of which are rotated by a single motor through a reduction drive. The device also includes a circuit for comparison of the code signals. This device provides simultaneous verification of all code paths and automates the process of initially setting the converters. The registers which store the codes of the reference converter and the converter under examination are connected through a circuit of discharge comparison of the codes to the

Card 1/3                              UDC: 681.142--523.8.001.57

L 22717-66

ACC NR: AP6002937

register for indicating the errors. These registers are also connected through the same circuit to a control device which engages and disengages the electro-magnetic clutch (see Fig. 1).

Fig. 1.    1 - Motor; 2 - reduction gear;
          3 - reference converter;
          4 - converter under examination;
          5 - circuit for comparison of the
          code signals; 6 and 7 - storage
          registers; 8 - register indicating
          the error; 9 - electromagnetic
          clutch.
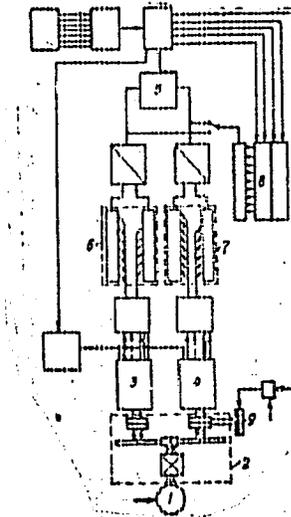


Card 2/3

L 12717-66

ACC NR: AP6002937

The clutch engages at the moment of coincidence of the codes of the reference
converter and the converter under examination. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 01Nov63

Card 3/3

LEMPERT Ye.N., inzh.; Gad (?)  N.A.;  inzh. G?, ...

Machine for collecting grain stubs.  Torf. prom. 38 no.7:7-9
'61.                                        (MIRA 14:12)

1.  Torfopredpriya'iye Chistoye, Gor'kovskogo sovnarkhoza.
                    (Peat machinery)

GOLOVCHINSKAYA, Ye.S.; GLUSHKOV, R.G.; CHEMERISSKAYA, A.A.

Purification of 8-methyltheobromine. Zhur.prikl.khim. 30
no.12:1806-1810 D '57.                                    (MIRA 11:1)
                        (Xanthine)

YEVSTIGNEYEVA, R.P.; GLUSHKOV, R.G.; PREOBRAZHENSKIY, N.A.

Isoquinoline compounds. Part 15: Synthesis of isomeric o-methyl-psychotrines. Zhur. ob. khim. 28 no.9:2463-2472 S '58.

(MIRA 11:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.
   (Alkaloids)        (Phychotrine)

5(3), 17(3)                                            SOV/80-32-4-39/47

AUTHORS:        Glushkov, R. G.  and Golovchinskaya, Ye.S.

TITLE·          The Synthesis of α, β Cyclopentamethylenetetrazole (Corazole) (Sintez
                α, β -tsiklopentametilentetrazola (korazola)

PERIODICAL:     Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 920-923 (USSR)

ABSTRACT:       The α, β -cyclopentamethylenetetrazole (corazole) is a powerful camphor-
                like drug with respect to its action on respiration, central nervous
                system and blood circulation  There are many patents for various
                methods of its preparation.  The authors made use of one of the German
                patents of Knoll /Ref 5/ and introduced some modifications and improve-
                ments in order to develop a method of corazole synthesis, which could
                be suitable for practical purposes.  Two variants of the synthesis were
                developed.  In one of them, the oxime of cyclohexanone serves as an
                initial substance, and in the other - the lactam of ε leucine,  The
                purification of the technical corazole obtained is achieved by means
                of crystallization out of the small quantities of water.  A detailed
                 description of the synthesis and subsequent purification is given in
                the article.
                There are:  1 graph and 10 references, 1 of which is Soviet, 7 German,
Card 1/2        1 American and 1 French

SOV/80-32-4-39/47

The Synthesis of  α, β -Cyclopentamethylenetetrazole (Corazole)

ASSOCIATION:   Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy in-
               stitut imeni S. Ordzhonikidze (All-Union Scientific Research Chemical-
               Pharmaceutical Institut imeni S. Ordzhonikidze)

SUBMITTED:     November 29, 1957

Card 2/2

GLUSHKOV, R.G.; GOLOVCHINSKAYA, Ye.S.

Synthesis of corasole ( , -pentamethylentetrazole) from capro-
lactum. Med.prom. 14 no.1:12-15 Ja '60.                (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsev:icheskiy
institut imeni S. Ordzhonikidze.
                 (METRAZOLE)
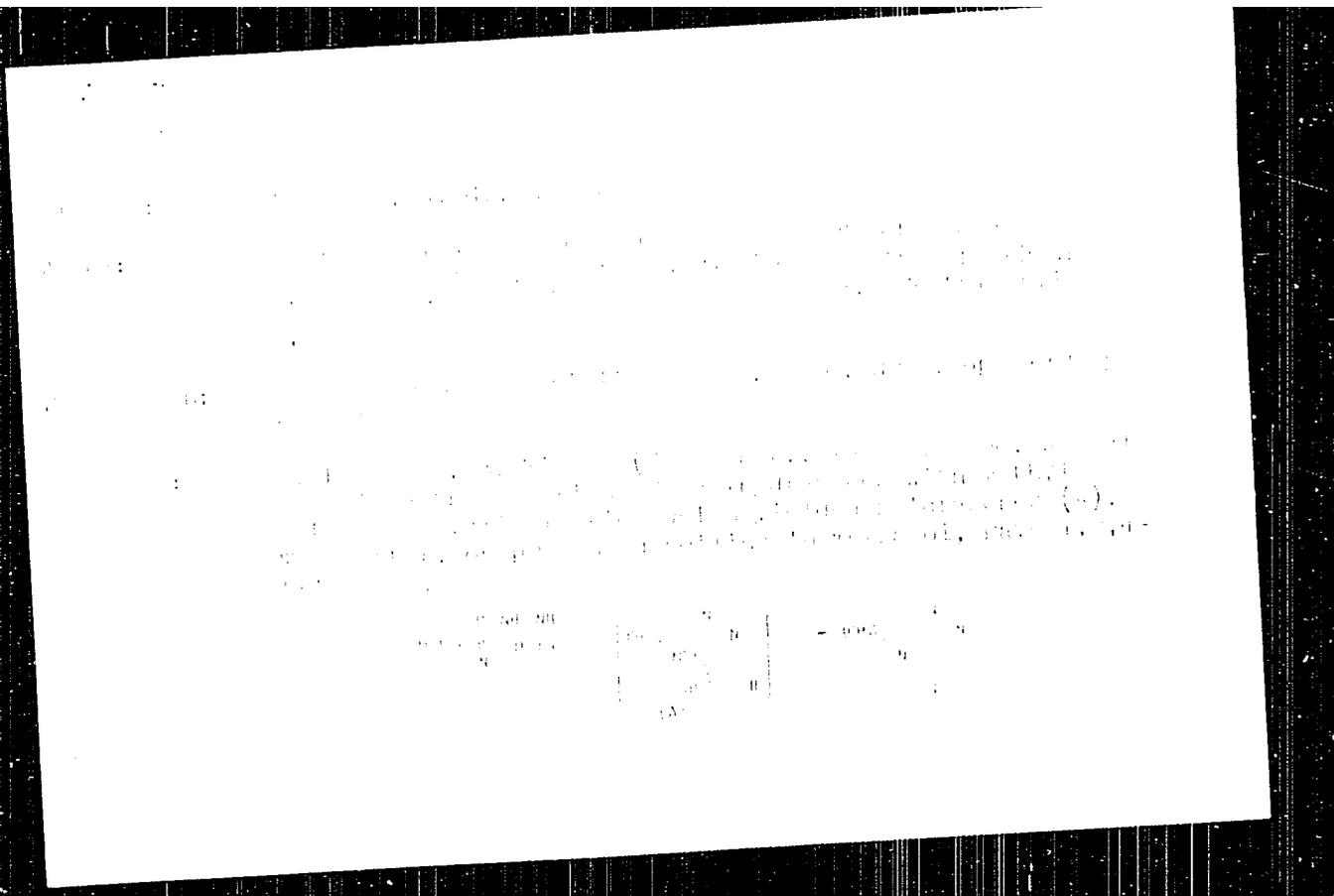
GLUSHKOV, R.G.; MAGIDSON, O.Yu.

Condensed polymethylene derivatives of heterocycles, based on
lactams. Part 2: Tendency of 2-phenyl-4-(2'-homopiperidylene)-
5-oxazolone to rearrange into 2-phenyl-1,5-pentamethylene-4-
imidazolecarboxylic acid and its methyl ester. Zhur.ob.khim.
30 no.6:1855-1860 Je '60.                    (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-
cheskiy institut imeni S. Ordzhonikidze.
            (Imidazolecarboxylic acid)  (Oxazolinone)

GLUSHKOV, P.G.; MAGIDSON, O.Yu.

Synthesis of some 8,9-pentamethylenepurines. Dokl.AN SSSR
133  no.3:585-587  Jl  '60.                    (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-
cheskiy institut imeni S.Ordzhonikidze.  Predstavleno Akad.
M.M.Shemyakinym.
                    (Purine)

GLUSHKOV, R.G.; MAGIDSON, O.Yu.

Condensed polymethylene derivatives based on lactams. Part 3:
Synthesis of 1,2-pentamethylenepyrimidines. Zhur. ob.khim. 31
no.1:189-193 Ja '61.                          (MIRA 14:1)

1: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonidizde.
                         (Pyrimidine)

GLUSHKOV, R.G.; MAGIDSON, O. Yu.

Condensed polymethylene derivatives of heterocycles based on
lactams.  Part. 4:  Synthesis of 8,9-pentamethylenepurines.
Zhur. ob. khim. 31 no.4:1173-1182 Ap '61.          (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-
cheskiy institut imeni S. Ordzhonikidze.
                    (Purine)

GLUSHKOV, R.G.; MAGIDSON, O.Yu.

Condensed polymethylene derivatives of heterocycles based on
lactams. Part 5: Synthesis of 8, 9-tri- and tetramethylene purine.
Zhur.ob.khim. 31 no.6:1906-1912 Je '61.    (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsev' -
cheskiy institut imeni S.Ordzhonikidze.
          (Cyclobutane)        (Purine)

GLUSHKOV, R.G.; MAGIDSON, O.Yu

Synthesis of $\beta$-vinylacrylic acid and its esters. Med. prom. 16 no.3:27-31 Mr '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
                    (PENTADIENOIC ACID)

MERKLIN, B. T.; WAGNER T, P. M.; MA    B.   T.

        N-substituted perylenes catalysts, etc., and a m  -/biline       (USSR 16:11)
        1597   I  '-5.

        1. The monomers produced  prepa  etc ' thy   u-p       ' weekly
        hite'hel Donal i, net lead lithe.

GLUSHKOV, R. G.  Cand Phys-Math Sci -- "Synthesis of condensed nitrogen-

containing heterocycles on the basis of certain lactams." Mos, 1961  (Acad Sci

USSR.   Inst of Inorganic Chem im N. D. Zelinskiy).  (KL, 4-61, 186)

-61-

GLUSHKOV, T.

     Formalin preparation "Internal constitution of hamster."
     Biol i khim  7  no. 2: 59-61 '64.

GLUSHKOV, V., inzh. ekon. (Stalingrad).

Remarks on the determination of the number of engineering workers
and employees in a workshop. Sots. trud no.2:130-131 F '58.
                        (Industrial management)                (MIRA 11:1)

GLUSHKOV, V. (Khar'kov); GRUBE, G. (Alma-Ata); FINOGENOV, N.
(Petrozavodsk); MARTINOVICH, A. (Murmansk); KALLING, V.
(Tallin); TAMAROVSKIY, V. (Magadan); PAPANDOPULO, S.
(Tbilisi); REUTOVA, I. (Novosibirsk)

Our outside correspondents report. Grazhd.av. 18 no.7:24-25
                                              (MIRA 14:8)
Jl '61.

1. Vneshtatnyye korrespondenty zhurnala "Grazhdanskaya
aviatsiya".
                (Aeronautics, Commercial)

KRASOVSKIY, B.M., inzh.; GLUSHKOV, V.E., inzh.

Calculational relationship between consumer loads and heating
loads in the solution of problems in centralized control of
central heating systems.  Elek. sta 36 no.4:42-43  Ap '65.

GLUSHKOV, S.; MAKHORKIN, I.

[Soviet Kamchatka] Sovetskaia Kamchatka. Moskva, Izd-vo
"Znanie", 1953. 31 p.                                       (MLRA 6:11)
                                                            (Kamchatka)

GLUSHKOV, V.F.

GLUSHKOV, V.F.

Wound of the left ventricle of the heart. Khirurgiia no.5:69
My '54.                                                    (MLRA 7:7)

1. Iz khirurgicheskogo otdeleniya Belovskoy gorodskoy bol'nitsy
No. 1 Kemerovskoy oblasti.
        (HEART, wounds and injuries,
         *left ventricle)
        (WOUNDS AND INJURIES,
         *heart, left ventricle)

GLUSHKOV, V.F.  (Belovo Kemrovskoy oblasti)

Intestinal obstruction in children caused by hawthorn berries.
Khirurgiia no.9:71 S '54.                                  (MLRA 7:12)
        (FRUITS,
            hawthorn berries causing intestinal obstruct. in child.)
        (INTESTINAL OBSTRUCTION, in infant and child,
            caused by hawthorn berries)

GLUSHKOV, V.F.

Method for painless subcutaneous injection of fluids. Khirurgiia
(MIRA 9:7)
32 no.3:83 Mr '56.

1. Iz gorodskoy bol'nitsy g.Belovo Kemerovskoy oblasti.
   (INJECTIONS, HYPODERMIC)

GLUSHKOV, V.F.

Prevention of burns in the distillation shop of the Belovo zinc plant. Ortop., travm. i protez. 18 no.2:36-37 Mr-Ap '57.
(MLRA 10:8)

1. Iz Belovskogo gorzdravotdela (zav. - A.I.Pbdanov)
    (INDUSTRIAL HYGIENE
        prev. of burns in lead factory)
    (BURNS, prev. and control
        in lead factory)

GLUSHKOV, V.F.

Primary suture in rupture of the urethra. Urologiia  25 no.2:15-
18 Mr-Ap '60.                                         (MIRA 13:12)
          (URETHRA—RUPTURE)            (SUTURES)

GLUSHKOV, V.F.

Preventing complications in subcutaneous infusions.  Med. sestra
20 no.1:48 Ja '61.  (MIRA 14:3)

1. Belovskaya gorodskaya bol'nitsa No.1 Kemerovskoy oblasti.
(INJECTIONS, SUBCUTANEOUS)

GLUSHKOV, Viktor Grigor'yevich, inzh., gidrolog [1883-1939]; L'VOVICH, M.I.;
GERASIMOV, I.P., akademik, red.; BLIZNYAK, Ye.V., red. [deceased];
DAVYDOV, M.I., KUNIN, V.N., otv. red.; POSLAVSKIY, V.V., red.; BIRINA,
A.V., red. izd-va; POLYAKOVA, T.V., tekhn. red.

[Theoretical problems and methods of hydrological research] Voprosy
teorii i metody gidrologicheskikh issledovanii. Moskva, Izd-vo
Akad. nauk SSSR, 1961.  415 p.                            (MIRA 14:9)
                    (Hydrology—Research)

GLUSHKOV, V.M.

Gluškov, V. M.   On the theory of $ZA$-groups.  Doklady
Akad. Nauk SSSR. (N.S.) 74, 885-888 (1950).   (Russian)
The first part of this paper contains in the group with

GLUSHKOV, V. M.

On normalizers of complete subgroups in (U.S.)
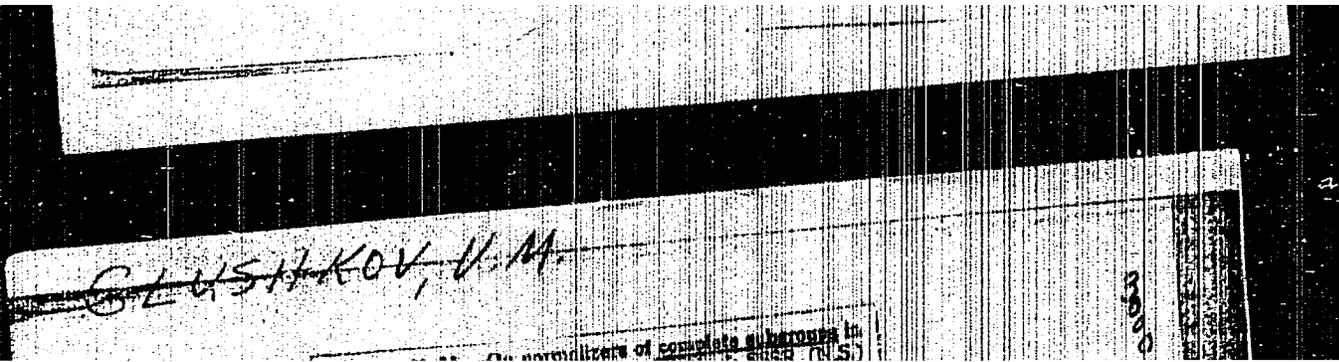
Source: Mathematical Reviews, 1950  Vol 11  No. 8

GLUSHKOV, Viktor Mikhaylovich.

Ural Forest Technological Inst. Academic degree of Doctor of Physical and Mathematical Sciences, based on his defense, 26 December 1955, in the Council of Moscow Order of Lenin and Order of Labor Red Banner State U imeni Lomonosov, of his dissertation entitled: "Topological locally nil potent groups."

Academic degree and/or title: Doctor of Sciences

SO:  Decisions of VAK, List no. 5, 3 Mar 56, Byulleten'
     MVO SSSR, No. 2, Jan 57, Moscow, pp 17-20, Uncl.   JPRS/NY-466

GLUSHKOV, V. M.
USSR/Mathematics

Card 1/1

Author       :   Glushkov, V. M.

Title        :   About one class of non-commutative locally-bicompact groups

Periodical   :   Dokl. AN SSSR., 96, Ed. 2.  229 - 232, May 1954

Abstract     :   Report is devoted to the study of locally bicompact, locally
                 nilpotent groups.  According to certain theorems a locally bi-
                 compact, locally nilpotent group is then and only then a Lie
                 group when the subgroup of all its bicompact elements is a Lie
                 group.  Certain theorems show that the properties of arbitrary
                 locally bicompact locally nilpotent groups are to a greater
                 extent determined by the properties of their maximum periodical
                 sub-groups.  Any periodical locally bicompact locally nilpotent
                 group possesses open bicompact sub-groups.  Examples of such
                 groups are given.  Nine references; 7 USSR since 1938.

Institution  :   Ural Forest Technical Institute

Submitted    :   Presented by Academician P. S. Aleksandrov, March 3, 1954,
                 March 2, 1954.

Mathematical Reviews
Vol. 14 No. 7
July - August, 1953
Algebra

Glushkov, V. M.  On the central series of infinite groups.
Mat. Sbornik N.S. 31(73), 491-496 (1952).  (Russian)
In a group with an ascending [descending] central series,
a so-called ZA-group [ZD-group], the length of the upper
[lower] central series is called the ZA-class [ZD-class] of
the group. Several questions generalizing to the transfinite
are known facts about groups with finite ZA-class or

ZD-class are answered. Foremost is the result that for every ordinal $\gamma$, there exists a ZA-group with ZA-class $\gamma$. But, moreover, there exists such a group with the additional property of being a ZD-group with ZD-class not exceeding $\omega$. This contrasts the fact that a ZA-group which has a finite ZD-class must have its ZA-class also finite. For every ordinal $\gamma \gtrless \omega + 1$, there exists a ZA-group with ZA-class $\gamma$ which is not a ZD-group. Since [according to the (unavailable) dissertation of D. M. Smirnov, Ivanovskiĭ Gos. Pedagog. Inst., 1951] the ZD-class of a ZA-group with ZA-class $\omega$ can not exceed $\omega + 1$, only two possibilities exist for the ZD-class, namely, $\omega$ and $\omega + 1$; examples show that each possibility can be realized. If one of the maximal abelian normal subgroups $\mathfrak{A}$ of a ZA-group $\mathfrak{G}$ is contained in a hypercenter with finite ordinal, then the ZA-class of $\mathfrak{G}$ is known [using the cited dissertation] to be finite; by contrast, if $\mathfrak{A}$ is contained in a hypercenter with ordinal not exceeding $\omega$, then the ZA-class of $\mathfrak{G}$ can be arbitrary. All these results follow readily from the main theorem asserting, for arbitrary ordinal $\gamma$ and arbitrary field $P$, the existence of a group of type $P_\gamma$. A complete description of the so-called type $P_\gamma$ is too lengthy to be cited here.     R. A. Good.

GLUŠKOV, V. M.

Gluškov, V. M. **Exact triangular representations of Lie Z-algebras.** Dokl. Akad. Nauk SSSR (N.S.) 100, 617–620 (1955). (Russian)

The author generalizes G. Birkhoff's theorem on triangular representations of Lie algebras of finite rank to the much wider class of the so called Z-algebras of Lie. A Z-algebra of Lie is a Lie algebra which possesses a central system, i.e. a system $M = \{A_\alpha\}$ of ideals $A_\alpha$, ordered by inclusion, satisfying the following conditions: 1) The zero ideal of the given algebra $A$ as well as the algebra $A$ itself are included in $M$. 2) The system $M$ contains all unions and crosscuts of ideals belonging to $M$. 3) Let $a$ be an arbitrary nonzero element of $A$. If $A_\alpha$ is a maximal ideal of the system $M$ which does not contain $a$, then $[a, b] \in A_\alpha$ for any element $b$ of $A$. His principal result is that any Z-algebra of Lie possesses a faithful representation by strictly triangular matrices of a certain specified type.

The class of the Z-algebras of Lie includes as a subclass the locally nilpotent Lie algebras, i.e. algebras where any finite set of elements lies in a nilpotent algebra. He gives a simple proof of this assertion by using the following property of locally nilpotent Lie algebras: Any ideal of a locally nilpotent Lie algebra $L$ which is generated by the totality of commutators $[l, x]$, $x \in L$, and $l$ a fixed element of $L$, does not contain $l$.              *J. Levitzki* (Jerusalem).

GLUSHKOV, V.M. (Sverdlovsk)

Locally nilpotent groups without torsion, complete in simple topological fields. Mat.sbor.37 no.3:477-506 N-D'55.

(Groups, Theory of)

(MLRA 8:12)

GLUSHKOV, V. M.

Glushkov, V. M.   National product

GIVSKOV, V.M.

with $\varphi_\alpha$ on $G_\alpha$

Theorem. The group $G$ always exists: $G_\alpha \cap G_\beta = \{e\}$ for $\alpha \neq \beta$; $G$ is algebraically generated by the elements of the groups $G_\alpha$. If $G'$ is any other group satisfying (i), (ii), (iii) then there is a topological isomorphism of this onto ...
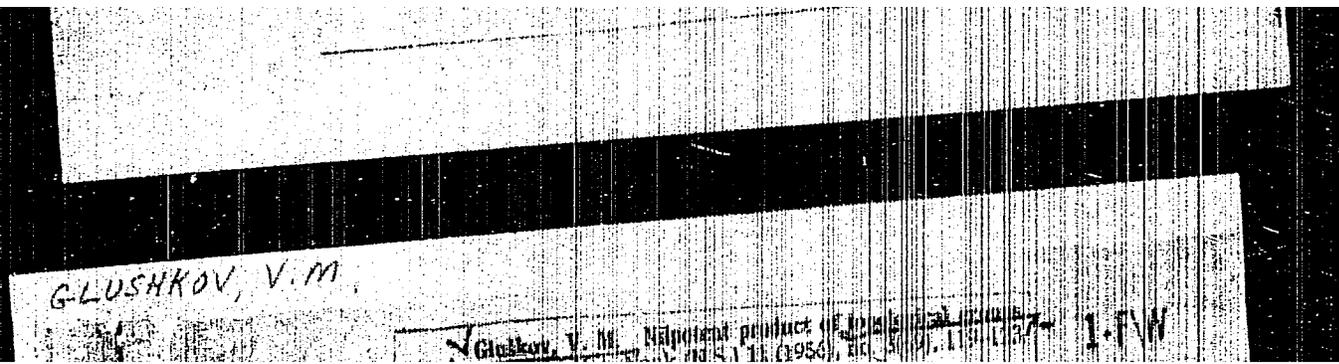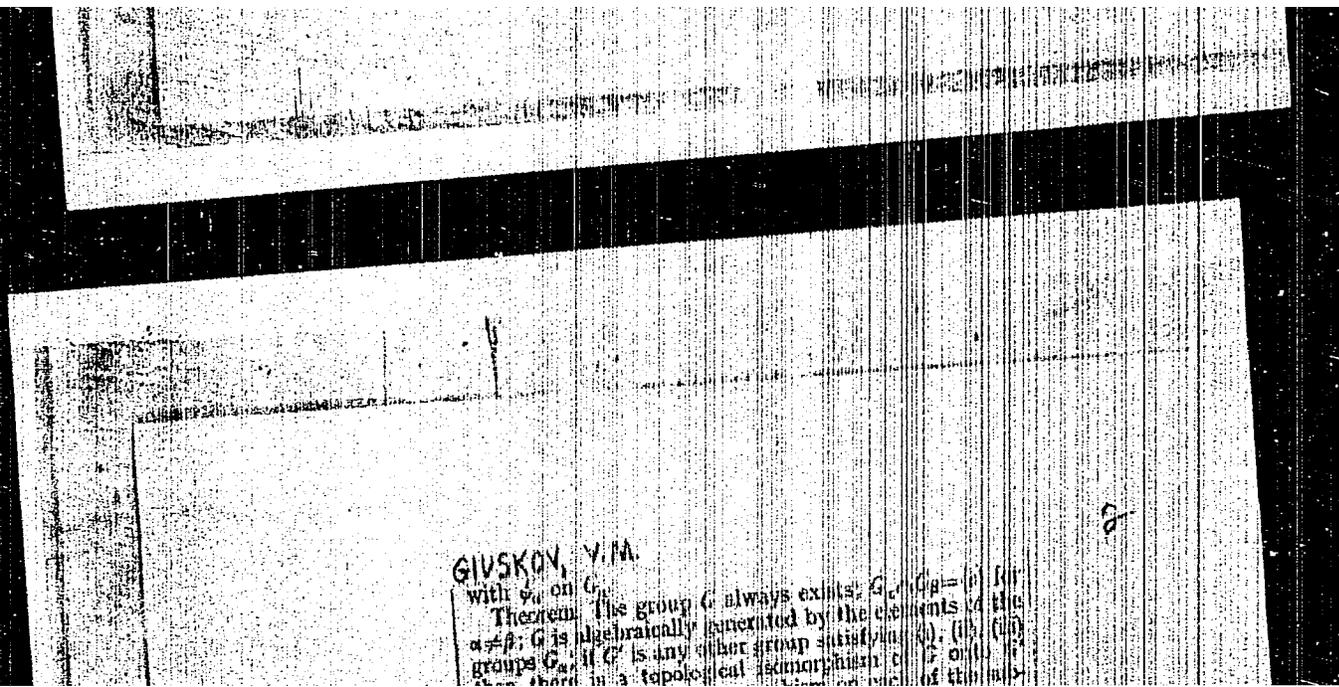
44-1-154

TRANSLATION FROM: Referativnyy zhurnal, Matematika, 1957, Nr 1, p 20 (USSR)

AUTHOR: Glushkov, V.M.

TITLE: Topological Groups and Lie Algebras (Topologicheskiye gruppi i algebry Li.)

PERIODICAL: Tr. 3-go Vses. matem. s"yezda, 2, Moscow, AN SSR, 1956, p 112

ABSTRACT: Bibliographic entry

Card 1/1

GLASHKOV, V. M.

PHASE I BOOK EXPLOITATION     SOV/3365

Akademiya nauk SSSR.

Trudy soveshchaniya po vychislitel'noy matematike i primeneniyu
sredstv vychislitel'noy tekhniki (Proceedings of the Conference On
Computational Mathematics and the Use of Computer Techniques) Baku, 1958.

Additional Sponsoring Agencies: Akademiya nauk SSSR. Vychislitel'nyy tsentr,
and Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

No contributors mentioned.

PURPOSE: This book is intended for pure and applied mathematicians, scientists,
engineers and scientific writers, whose work involves computation and the use
of digital and analog electronic computers.

COVERAGE: This book contains summaries of reports made at the Conference on
Computational Mathematics and the Application of Computer Techniques.
The book is divided into two main parts. The first part is devoted to
computational mathematics and contains 17 summaries of reports. The second
section is devoted to computing techniques and contains 25 summaries of
reports. No personalities are mentioned. No references are given.

Belotserkovskiy, S.M., and P. I. Chushkin.  Solution of Some Problems
of High Speed Aerodynamics on Electronic Digital Computers                   56

Val'denberg, Yu.S.  Specialized Mathematical Machine of Continuous
Operation for the Solution of Integral Equations                             57

Tsypkin, Ya.Z.  Discrete Method of the Analysis and Synthesis of
Continuous Systems                                                           59

Glushkov, V.M.  On the Basic Trends of Work at the Computing Techniques
Laboratory of the Institute of Mathematics of the Academy of Sciences,       61
USSR

Ponomarskiy, N.Y.  State of the Problem of Transforming Nomograms            62

AVAILABLE: Library of Congress (QA75.07)

AC/fal
1-13-60

Card 7/7

GLUSHKOV, V.M.; GNEDENKO, B.V.

Electronic calculating machines. Visnyk AN URSR  28 no.9:3-10
S '57.                (Electronic calculating machines)                (MIRA 11:1)

GLUSHKOV, V.M.

Lie's algebras of locally bicompact groups.    Usp.mat.nauk 12
no.2(74):137-142 Mr-Ap '57.                    (MLRA 10:7)
                            (Groups, Theory of)

GLUSHKOV, V.M.

Structure of locally bicompact groups and Hilbert's fifth problem.
(MIRA 10:7)
Usp.mat.nauk 12 no.2(74):3-41 Mr-Ap '57.
(Groups, Theory of)

CARD 1/2          PG - 775

SUBJECT    USSR/MATHEMATICS/Algebra
AUTHOR     GLUSKOV V.M.
TITLE      On the theory of nilpotent locally bicompact group:
PERIODICAL Izvestija Akad.Nauk 20, 513-546 (1956)
           reviewed 5/1957

Let G be a topological group. If the factors $G_{i-1}/G_i$ $(i=1,\ldots,k)$ of its normal series

$$G = G_0 \supset G_1 \supset \ldots \supset G_k = \{e\}$$

are topologically isomorphic to the subgroups of the additive group of the p-adic number field or to finite cyclic p-groups (p - prime number), then the normal series is called a p-series. If in it cyclic factors are missing, then it is called a p-adic series. The present paper is devoted to the investigation of nilpotent bicompact groups with finite p-series. Several theorems are proved, e.g.:

1. By preserving of the topology every nilpotent bicompact group G with a finite p-adic series can be imbedded as an open subgroup into a nilpotent Lie group H with a finite rank over the p-adic number field.

2. From the topological isomorphism of the open subgroups $G_1$ and $G_2$ of the nilpotent Lie groups $H_1$ and $H_2$ with a finite rank over the p-adic number field there follows the topological isomorphism of the groups $H_1$ and $H_2$.

_____ 20, 513-546 (1956)      CARD 2/2        PG - 775

_____roup G with a finite p-adic

Glushkov, V.M.

42-1-9/13

AUTHOR: ALEKSANDROV,P.S., GLUSHKOV,V.M.

TITLE: Aleksandr Gennadievich Kurosh (On the Occasion of his 50th Birthday) (Aleksandr Gennadievich Kurosh (K pyatidesyatiletiyu so dnya rozhdeniya))

PERIODICAL: Uspekhi Matematicheskikh Nauk, 1958,Vol.13,Nr 1,pp 217-224 (USSR)

ABSTRACT: This is a short biography, a summary of the scientific work and an appreciation of the merits of Kurosh as researcher and prominent pedagogue. The paper contains a list of scientific publications (ordered with respect to the years) with altogether 43 numbers and a photo of the celebrator of the jubilee.

AVAILABLE: Library of Congress
Card 1/1     1. Biography    2. Scientific reports

SOV/1345

PHASE   I   BOOK EXPLOITATION

28(2)

Akademiya nauk Ukrainskoy SSR. Vychislitel'nyy tsentr

Voprosy vychislitel'noy matematiki i tekhniki (Problems in Computer
Mathematics and Technique) Kiyev, Izd-vo AN Ukrainskoy SSR,
1958.  97 p.(Series:  Its:  Sbornik trudov, vyp. 3)  7,000
copies printed.

Editorial Board:  Glushkov, V.M., Doctor of Physical and Mathematical
    Sciences (Resp. Ed.), Dashevskiy, L.N., Candidate of Technical
    Sciences,  and Shkabara, Ye. A., Candidate of Technical Sciences;
    Ed. of Publishing House: Kaplan, Ya. L.; Tech. Ed.: Rakhlina, N.P.

PURPOSE:  This collection of articles, issued by the Computer Center
    of the Ukrainian SSR Academy of Sciences,is intended for
    scientists and engineers in the field of computer mathematics and
    techniques, and for students of vuzes specializing in this field.

COVERAGE:  The collection is devoted to the programming of mathe-
    matical problems on electronic computers and to the design of

Card 1/8

SC7/1345

Problems in Computer Mathematics (Cont.)

TABLE OF CONTENTS:

Pogrebinskiy, S.B., and I.B. Pogrebinskiy. Performing
Operations of Multiplication and Division in Electronic
Digital Computers                                                          3
    The authors describe an improved, shortened method of per-
forming multiplication and division which not only simplifies
the construction of arithmetic units of high-speed computers
but also considerably increases their speed of operation.
There are no references.

Korolyuk, V.S., L.P. Nizhnik, and Ye.L. Yushchenko. Pro-
gramming of Tables for Optimum Methods of Statistical
Acceptance Control                                                         9
    The authors refer to A.N. Kolmogorov, who posed the pro-
blem of determining a statistical control method which
would provide the most economical effects when checking
large quantities of products. Practical use of this method
requires the establishment of appropriate tables. The

Card 3/8

SOV/1345

Problems in Computer Mathematics (Cont.)

authors explain the procedure for calculating these tables
as applicable for programming on the small electronic
tabular calculator MESM of the Ukrainian SSR Academy of
Sciences. There are 2 Soviet references.

18

Rabinovich, Z.L. Arithmetic Unit of the Specialized
Electronic Calculator SESM-1
     The author describes the circuit and operating prin-
ciple of the series-action arithmetic unit of the
SESM-1 machine and explains how operations are performed
in it. The SESM-1 is used for solving systems of linear
algebraic equations by Zeidel's method.

     The author thanks the following persons for their cooperation in
developing details of the arithmetic units: Engineer A.L. Gladysh
(control of arithmetic units), V.V. Krayizhny (internal
storage memory), and I.T. Parkhomenko (summator and control of
operations).

     There are 3 Soviet references.

Card 4/2

Problems in Computer Mathematics (Cont.)    SOV/____

gate circuit.   There is 1 Soviet reference.

Dashevskiy, L.N.   Design of Symmetrical Flip-Flops for     55
Maximum Reliability
    The author explains the design procedure and derives
and discusses the necessary formulas.   Technical data
are provided.   There are 6 references, of which 4 are
English and 2 Soviet.

Kondalev, A.I., and B.N. Malinovskiy.   Dynamic Flip-Flop With    71
Triode Transistors
    The authors describe a dynamic flip-flop using point-
contact triode transistors, discuss its circuit and pro-
vide experimental data on its performance under various
operating conditions.   There are no references.

Abalyshnikova, L.M., and S.B. Pogrebinskiy.   Investigation of    76
a Flip-Flop With Junction Triode Transistors
    The authors discuss the circuit of a flip-flop using
junction type transistors, which ensures stable operation

Card 6/8

Problems in Computer Mathematics (Cont.)

at frequencies up to 400 kc. They also explain a method
for approximate calculation of circuit parameters and pro-
vide results of experimental investigation. There is 1
Soviet reference.

Zorina, Z.S., and Ye.A. Shkabara.  Ferrite-core Gates Con-    84
trolled by Triode Transistors
    The authors explain why gates with magnetic elements in
a flip-flop circuit using triode transistors are pre-
ferable to gates using diode-transistors in the same
circuit.  There are 5 references, of which 4 are Soviet
and 1 English.

Abalyshnikova, L.M.  Some Results of an Investigation of     94
Electron Tube Performance in High-speed Electronic Com-
puters
    The author presents statistical data on the causes of
breakdown of electron tubes in high-speed computers with
respect to operating conditions.  In conclusion, the

Card 7/8

Problems in Computer Mathematics (Cont.)    SOV/1945

author states that: 1. the 6N0S and 6N8S tubes suffer breakdown either during the first 1,000 hours of operation or they last 5,000-7,000 hours. 2. the most frequent defects which develop in tubes under any operating conditions are a decrease in plate current and a change in characteristics. There are 6 Soviet references".

AVAILABLE:  Library of Congress

JP/ej
4-2-59

Card 8/8

Problemy kibernetiki, vyp. 2 (Problems of Cybernetics, No. 2),
Moscow, Fizmatgiz, 1959. 323 p. Errata slip inserted. 20,000
copies printed.

Ed.: A. A. Lyapunov; Compilers-Editors: O. B. Lupanov, Eds.:
B. Yu. Pil'chak, S. V. Yablonskiy, and Yu. I. Yanov. Eds.:
A. A. Konoplyankin, and M. L. Smolyarskiy; Tech. Ed.:
S. M. Akhlamov.

PURPOSE: The purpose of this collection of articles is to organize
scientific papers on cybernetics and to unite the efforts and
interests of Soviet scientists working in this field.

COVERAGE: This is the second volume of "Problemy kibernetiki"
dealing with problems of biology, mathematics and engineering
as they relate to cybernetics. The first volume, which appeared
in 1958, considered problems of programming, machine translation
and computer design. Future volumes propose to include a still
greater number of subjects (including translations) dealing
with cybernetics. They rank the following persons for their
list 5 recent Soviet book related to cybernetics, including
help in preparing the book for publication: P. V. Yakovlevskaya,
T. L. Gavrilova, A. A. Muchnik, B. I. Pinkov, M. L. Tsetlin,
and V. S. Shtarkman. References follow each article. There
are no references.

PART II.  THEORY OF CONTROL SYSTEMS

Yablonskiy, S. V. (Moscow).  On Algorithmic Difficulties
Encountered in the Synthesis of Minimal Switching Circuits

Krichevskiy, R. Ye. (Moscow).  On the Realization of Functions
by Superposition

PART III.  PROGRAMMING

Glushkov, V. M. (Kiev).  On a Method of Automatic Programming

Stogniy, A. A. (Kiev).  Principles of Developing a Specialized
Automatic Programming

GLUSHKOV, V. A.

16(0)                    PHASE I BOOK EXPLOITATION          SOV/3177

Matematika v SSSR za sorok let, 1917-1957. ... 1. Obzornyye stat'i
    (Mathematics in the USSR for Forty Years. (1917-1957) Vol 1:
    Review Articles) Moscow, Fizmatgiz, 1959. 1002 p.  5,500 copies
    printed.

Eds:  A. G. Kurosh, (Chief Ed.), V. I. Bityutskov, V. G. Boltyanskiy,
    Ye. B. Dynkin, G. Ye. Shilova, and A. P. Yushkevich; Ed. (Inside
    book):  A. F. Lapko; Tech. Ed.:  S. N. Akhlamov.

PURPOSE:  This book is intended for mathematicians and historians
    of mathematics interested in Soviet contributions to the field.

COVERAGE:  This book is Volume I of a major 2-volume work on the
    history of Soviet mathematics.  Volume I surveys the chief con-
    tributions made by Soviet mathematicians during the period 1947-
    1957; Volume II will contain a bibliography of major works since
    1917 and biographic sketches of some of the leading mathema-
    ticians.  This work follows the tradition set by two earlier
    works:  Matematika v SSSR za pyatnadtsat' let (Mathematics in
    the USSR for 15 Years) and Matematika v SSSR za tridtsat' let

Card 1/18
                 7

Mathematics in the USSR (Cont.)

SOV/3177

(Mathematics in the USSR for 30 Years). The book is divided into the major divisions of the field, i.e., algebra, topology, theory of probabilities, functional analysis, etc., and contributed and outstanding problems in each discussed. A listing of the major mathematicians is included with references to their contributions in the field.

Card 2/12

SOV/3177

Mathematics in the USSR (Cont.)

Card 3/10

Mathematics in the USSR (Cont.)                                    SOV/3177

Ch. IV.  Logical and Logico-Mathematical Calculus                      83

Card 4/18

16(1)

AUTHOR:      Glushkov, V.M. (Kiyev)

TITLE:       On the Theory of Special Locally Compact Groups

PERIODICAL:  Ukrainskiy matematicheskiy zhurnal, 1959, Vol 11, No 1, pp 247-252
             (USSR)

ABSTRACT:    Theorem 1: In locally nilpotent locally compact groups the
             minimum conditions (descending chain conditions) are equivalent
             for arbitrary closed subgroups and for Abelian closed subgroups.
             Theorem 2: A locally nilpotent locally compact group G with
             minimum condition for closed Abelian subgroups has an increasing
             central series and is an extension of a direct product of finitely
             many one-dimensional toroidal and discrete quasicyclic groups by
             a finite nilpotent group. Here every toroidal subgroup is con-
             tained in the center of G.
             Topological locally nilpotent groups with minimum condition for
             closed subgroups are called special groups. The discretely
             topological direct product $B_{p_1} \cdot \ldots \cdot G_{p_K}$ is called the discrete
             component of the special locally compact group G and the
             connected component of the unity A of G is called the connected
             component of G.

Card 1/2

On the Theory of Special Locally Compact Groups     SOV/...

Theorem 3: The discrete component of a special locally compact group G satisfies the minimum condition for subgroups.

Theorem 4: Every special locally compact group G is isomorphic to the factor group of the direct product of the connected and discrete components of G with respect to the central discrete subgroup.

Theorem 5: The ... of the special locally compact groups consists only of finite direct products of discrete special p-groups and ... toruses as well as of factor groups of such ... with respect to discrete subgroups.

S.N.Chernikov is mentioned in the paper.

There are ... references which are Soviet, ... German and ... translated ... Russian.

SUBMITTED: April ... 

Card 2/2

SOV/?? ...

16(1)

AUTHOR:  Glushkov, V.M. (Kiyev)

TITLE:  On the Structure of Connected Locally Bicompact Groups
(O stroyenii svyaznykh lokal'no bikompaktnykh grupp)

PERIODICAL:  Matematicheskiy sbornik, 1955, Vol 38, Nr 1, ...

ABSTRACT:  Let G be a locally bicompact group and B×L its local
decomposition into the direct product of the bicompact group B
and the local Lie group L (compare Glushkov [Ref 3_7]. Such a
decomposition is called a bicompact decomposition. The author
gives a method which permits to construct bicompact decomposition
in which the components B and L are determined uniquely by the
group  up to a local isomorphism. The author investigates the
representations of arbitrary connected locally bicompact groups
by factor groups of direct products of groups with a simple
structure. Some results an Lie groups with isomorphic Lie
algebras are transferred to arbitrary connected locally bicompact
groups. An interesting relation between the local and the linear
connection is proved: a connected locally bicompact group is
locally connected then and only then if it is linearly connected.
The proofs base on the earlier papers of the author [Ref 3_4].
10 theorems, 9 lemmas and numerous definitions and conclusions

Card 1/2

On the Structure of Connected Locally Bicompact Groups    SO7/59-46-1-2/5

are formulated. The author mentions A.I.Mal'tsev. Finally the author completes a theorem of his paper on locally nilpotent groups free of torsion (Matematicheskiy sbornik, 1955, Vol 37 pp 477-506).
There are 10 references, 7 of which are Soviet and 3 American.

SUBMITTED:   September 2, 1957

Card 2/2

GLUSHKOV, V. M.

"Concerning One Aspect of Cybernetics," Transcript of a lecture given before a seminar for improving the skills of teachers in tekhnikumy /technical schools/. Kiev, 1960, 17 pages.

GLUSHKOV, Viktor Mikhaylovich [Hlushkov, V.M.], doktor fiziko-maten.nauk; YUSHCHENKO, K.L., otv.red.; TEPLYAKOVA, A.S., red.

[Control elements in automatic production processes] Keruiuchi mashyny avtomatyzovanoho vyrobnytstva. Kyiv, 1960. 38 p. (Tova- rystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.5, no.9). (MIRA 13:11)
(Automatic control) (Servomechanisms)

S/194/61/000/000/013/077
D201/D302

9.7100

AUTHORS:      Glushkov, V.M., Rabinovich, Z... and Voyteva, Ye.L.

TITLE:        Analysis of trigger transients in an electron digi-
              tal computer

PERIODICAL:   Referativnyy zhurnal  Avtomatika i radioelektronika,
              no. 6, 1961, 38, abstract 6 B292 (V sb. Vses. Nezh-
              vuz. konferentsiya po teorii metodam rascheta
              nelineynykh elektr. tsepey, no. 2-II (2), Tashkent,
              1960, 95-112)

TEXT:      Description of methods used and of certain preliminary
results of mathematical analysis by the computer 'Ural' of trans-
ients of a trigger are given.  The analysis was undertaken in order
to explain certain fine details of the mechanism of trigger opera-
tion and to determine possible ways of its design from the point of
view of its operating reliability.  The trigger circuit investiga-
ted was that used in the БЭСМ (BESM) computer.  The analysis was

Card 1/2

5/194/61/000/006/013/077
D201/D302

Analysis of trigger transients...

performed by means of the actual solution of a system of non-linear differential equations by the 'Ural' computer. It was thus possible to analyze the mechanism of trigger operation and to understand the relationship between the reliability of the switchover and the speed of trigger operation. The preliminary results of the analysis are given. 11 figures. 4 references. /Abstracter's note: Complete translation_/

Card 2/2

GLUSHKOV, Viktor Mikhaylovich, doktor teknicheskikh nauk

Informational possibilities of modern electronic computers.
Izv. vys. ucheb. zav.; elektromekh. 3 no.7:3-9 '60.
(MIRA 13:9)

1. Chlen-korrespondent akademii nauk USSR, direktor Vychislitel'-
nogo TSentra AN USSR.
            (Electronic calculating machines)

S/021/60/000/004/005/010
D232/D305

9,7100

AUTHOR:    Hlushkov, V.M., Corresponding Member of AS UkrSSR

TITLE:    Two universal criteria of efficiency for computers

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 4,
           1960, 477 - 481

TEXT: The criteria proposed by the author take into account all
the basic parameters of the computer; each criterion can be used
independently. A fundamental concept is that of the effective
speed of the computer, as distinct from nominal speed. It takes
into account all time losses during the use of the computer. Auxi-
liary concepts for exact definition of this one are: A finite
class A of problems which the computer is supposed to solve, sta-
tistics of the class i.e. the relative frequency f(x, with which
every problem a from A occurs during unlimited time, algorithmic
complexity of solution of the problem. The latter can be defined
in four different ways: 1) By the number of typical operations

Card 1/5

S/021/60/000/004.005/010
D232/D305

Two universal criteria of ...

necessary for the solution; 2) By the total number of arithmetical operations necessary for the solution (this definition is suitable only for arithmetical problems); 3) By total quantity of arithmetical operations, each one being counted according to its degree of complexity; the unit of complexity is e.g. the addition of two binary numbers of 30 digits each so that the complexity of addition of 2 numbers of n digits respectively, mn/30 etc. (arithmetical problems only); 4) The fourth method is related to the first in the same way as the third to the second: a universal unit of complexity must be introduced for all operations (including control op. and logical op.). The author does not discuss exact methods of definition. The problems from A are put successively on a real computer B, after solution of each problem one can expect a new problem to come, always with the same probability f(x). Time is counted from the instant when the computer has started operating. Then one can estimate the algorithmic complexity of the work carried out by the computer during an arbitrary period $\#$ - denoted by N(t). The mathematical expectation of the limit lim N(t)/t),

Card 2/5

S/021/60/000/004/005/010
D232/D305

Two universal criteria of ...

$t \rightarrow \infty$ is called the effective speed of the computer, and is denoted by $n_e$, while the nominal speed is denoted by $n_n$. If one denotes by $t(a)$ the actual time (in secs) used for solving the problem a (taking into account the input and output times and daily and weekly maintenance) one has

$$n_e = \frac{\sum_{a \in A} f(a) \, N(a)}{\sum_{a \in A} f(a) \, t(a)}$$

(1)

$f(a)$ being the probability for the problem a to occur. Since it is often impossible to determine $f(a)$ accurately one must use the formulae

$$n_e = pn_n, \quad (2) \qquad p = p_o p_m p_v p_k p_p.$$

(3)

Card 3/5

Two universal criteria of ...

S/02.60.000 09: 005/010
D232/D30?

$p_0$ being the coefficient of efficiency of the operating system of the computer (without external operations), $p_m$ that of decrease in speed due to information exchange with magnetic cylinder and magnetic tapes, $p_v$ coefficient of time loss during input and output, etc. The coefficient $p_0$ can be defined as the product of coefficients of acceleration or retardation due to specific properties of the set of operations of the computer. The first criterion is that of the maximum of effective speed. Its chief defect consists in not taking into account the complexity of the computer itself, i.e. economical factors. Therefore, its validity is restricted to the cases when the speed must be increased regardless of costs. For other cases the concept of the price of effective speed is introduced. A period T is established after which the computer must be replaced by a new one, and total expenses P·T for the construction of the computer and its use during T are determined. The author believes that programming expenses are not to be included

Card 4/5